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Evaluation of Conductivity Measurement Methods for Conductive Particulate Polymer Composite

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Abstract :

SIP-FRP-01 project aims at the development of conductive polymer composites for Electromagnetic Interference shielding (EMI) applications. Highly conductive materials are best suited for electromagnetic shielding. Polymers are generally insulators in nature. They can be made conductive by dispersing the particulate conductive fillers. Depending on the nature of the filler (metallic/nonmetallic) and the percentage of filler loading these novel materials can either behave as semiconductors or conductors. In literature various methods of conductivity measurements were reported for insulators, semiconductors and conductor materials. This document brings out the consolidated efforts made towards the evaluation and optimization of right procedures for measuring the conductivity of the various in house developed particulate polymer composites.